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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,653	03/17/2004	Heinz Eisenschmid	10191/3456	3928
26646	7590	05/12/2006	EXAMINER	
KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			ROGERS, DAVID A	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 05/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/802,653	<b>Applicant(s)</b> EISENSCHMID ET AL.	
	<b>Examiner</b> David A. Rogers	<b>Art Unit</b> 2856	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-9 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 and 12-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/3/06</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,718,819 to Schoess as applied to claim 1, and further in view of United States Patent Application Publication 2003/0062008 to Gramkow *et al.*

As shown in figures 2 and 3 the device of Schoess comprises a sensor (reference item 115) having a structured metal layer in the form of interdigital electrodes (reference items 137 and 139) that measures the dielectric of oil in an engine. The sensor is formed by a providing a metal structure on a nonconductive polymeric substrate (reference item 134). Official notice is hereby taken that plastics are known nonconductive polymeric materials. As the applicant did not timely traverse the prior assertion of official notice that the common knowledge or well-known in the art statement is taken to be admitted prior art.

The sensor is a capacitive sensor that can be used to detect the dielectric value of the oil. The sensor is provided on the inner surface of a

housing (reference item 111). The system also has a base member (reference item 14) that forms a cover to fit with the housing. This combination shields the sensor against disturbances. The housing has at least one inlet to allow oil into the housing.

Schoess teaches the claimed invention except for a recitation of manufacturing the sensor as a molded interconnect device. Gramkow *et al.*, however, teaches the benefits of molded interconnect devices. See, for example, paragraph 0009.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Schoess with the teachings of Gramkow *et al.* to provide a sensor manufactured using molded interconnect device techniques in order to save space and materials thus making the sensor smaller.

### ***Response to Arguments***

3. Applicant's arguments filed 27 March 2006 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies; i.e., a separate sensor in an oil pan that can be easily replaced, are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are

not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The applicant appears to argue that Gramkow *et al.* does not teach a sensor element formed using MID technology. However, Gramkow *et al.* was not relied upon for a sensor. Gramkow *et al.* teaches that MID production technologies are beneficial in creating electrical circuits that save space and expense. Furthermore, the sensor in figure 2 of Schoess clearly shows a three-dimensional sensor structure; i.e., a sensor that is placed about the inner surface of the housing. This sensor would benefit from MID technology since the expenses of a separate mounting device could be eliminated and since MID technology could be used to simultaneously create the connecting circuit (reference items 106 and 108).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*"Molded Interconnect Devices Reshape Electromechanical Design"*, clearly teaches the benefits of MID:

Nevertheless, for products with some degree of electromechanical complexity, MID technology is economically competitive. Unlike pc boards, which are typically limited to two-dimensional planes, MIDs can implement three-dimensional circuitry. Among other things, a circuit pattern with multiple planes allows better spacing of circuitry, as well as the connected switches and buttons.

Furthermore, MIDs can reduce component count and cost by embedding features such as a connector, a wire harness, or a lamp holder within the device. At the same time, MIDs can be designed to be self-supporting, thereby eliminating the additional


mechanical parts required to support pc boards. By reducing the required number of parts, MIDs save space and shorten assembly time.

United States Patent 4,241,384 clearly shows a housing formed of nonconductive plastic polymeric materials.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Rogers whose telephone number is (571) 272-2205. The examiner can normally be reached on Monday - Friday (0730 - 1600). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
dar  
07 May 2006

  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
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